Applicant	:	Monkhorst et al
Appl. No.	:	10/658,887
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IN THE SPECIFICATION:

Page 5, line 7 – page 6, line 3:

In early experiments with toroidal confinement of plasma, a containment time of Dt @ r2/DB was observed. Progress in the last 40 years has increased the containment time to Dt @ 1000 r2/DB. One existing fusion reactor concept is the Tokamak. ~~The magnetic field of a Tokamak 68 and a typical particle orbit 66 are illustrated in Fig. 5.~~ For the past 30 years, fusion efforts have been focussed on the Tokamak reactor using a D-T fuel. These efforts have culminated in the International Thermonuclear Experimental Reactor (ITER)~~, illustrated in Fig. 7~~. Recent experiments with Tokamaks suggest that classical transport, Dt @ r2/Dc, is possible, in which case the minimum plasma dimension can be reduced from meters to centimeters. These experiments involved the injection of energetic beams (50 to 100 keV), to heat the plasma to temperatures of 10 to 30 keV. See W. Heidbrink & G. J. Sadler, 34 Nuclear Fusion 535 (1994). The energetic beam ions in these experiments were observed to slow down and diffuse classically while the thermal plasma continued to diffuse anomalously fast. The reason for this is that the energetic beam ions have a large gyroradius and, as such, are insensitive to fluctuations with wavelengths shorter than the ion gyroradius (l < ai). The short-wavelength fluctuations tend to average over a cycle and thus cancel. Electrons, however, have a much smaller gyroradius, so they respond to the fluctuations and transport anomalously.

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Page 8, lines 3-16:

The field-reversed configuration (FRC) was discovered accidentally around 1960 at the Naval Research Laboratory during theta pinch experiments. A typical FRC topology, wherein the internal magnetic field reverses direction, is illustrated in ~~Fig. 8~~ Fig. 2 and ~~Fig. 10~~ Fig. 4, and particle orbits in a FRC are shown in ~~Fig. 11~~ Fig. 5 and ~~Fig. 14~~ Fig. 8. Regarding the FRC, many research programs have been supported in the United States and Japan. There is a comprehensive review paper on the theory and experiments of FRC research from 1960-1988. See M. Tuszewski, 28 Nuclear Fusion 2033, (1988). A white paper on FRC development describes the research in 1996 and recommendations for future research. See L. C. Steinhauer et al., 30 Fusion Technology 116 (1996). To this date, in FRC experiments the FRC has been formed with the theta pinch method. A consequence of this formation method is that the ions and electrons each carry half the current, which results in a negligible electrostatic field in the plasma and no electrostatic confinement. The ions and electrons in these FRCs were contained magnetically. In almost all FRC experiments, anomalous transport has been assumed. See, e.g., Tuszewski, beginning of section 1.5.2, at page 2072.